The BiLock Side Bar and Key Trigger Patent

BiLock has been distributing high security locks in North America since the mid 1980's. Successful installations have included airports, hospitals, universities, and casinos. A high security lock provides protection from physical attack (drilling, bumping, picking, etc) as well as controlled distribution with a patented key.



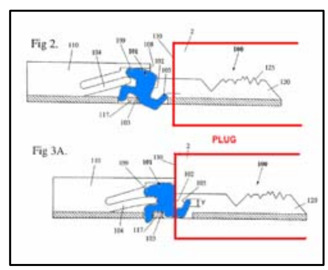
The BiLock system includes two rows of pins and a cooperating side bar for each row. The key is U-shaped to simultaneously register the two rows of pins. BiLock was awarded a utility patent on January 27, 2004 for a new version of its unique high security locking system. Appropriately they named the system New Generation (NG for short). The patent is number 6,681,609 and describes a movable Trigger in the key and interlocked Pins that block a Side Bar from depressing.

The Key



The standard BiLock key is made from Nickel Silver and has as a double row of cuts that are made prior to final forming. The key assembly includes the key blade, a Trigger, and the three piece key head.

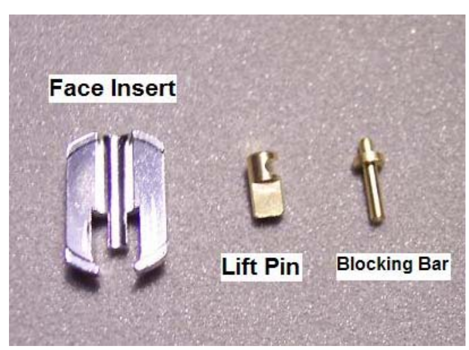
The Trigger mechanism is held between the two blades by the plastic key head. In its rest position the Trigger protrudes through a small opening in the key blade.



As the key enters the keyway opening of the plug, the bottom of the keyway channel forces the front of the Trigger upward.

The Cylinder

The BiLock cylinder is designed with two independent side bars. The patented New Generation design includes two pins - a Lifting Pin and a Blocking Bar that slide under a movable Face Insert. The Blocking Bar sits under the side bar when the cylinder is locked and the proper key is not inserted.



The Blocking Bar is inserted first. It lies horizontally across the face of the plug. The Lift Pin fits vertically over the Lifting Bar.





After both pins are in place, the Face Insert can be slid over the top of both pins. The sides of the Face Insert are slotted to mirror vertical grooves on the inside of the plug face.

Notice how the Blocking Bar sits in line with the Side Bar holes when it is the rest (locked) position.

The side bar will not be able to depress until the Blocking Bar is raised.



The Way They Work Together



When a proper key is inserted, the plug forces the Trigger up, which pushes the Lift Pin up, which drags the Blocking Bar up and out of the way of the Side Bar.

The BiLock New Generation utility patent is one of the most recent awarded to a high security lock company. The utility patent is just one of many key control features that ensure that unauthorized key duplication is prevented.

For more information on the BiLock patent or its products, contact BiLock Customer Service at 888-564-4656 or visit them at www.BiLock.com.

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